Troubleshooting
HP Notebook Series

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This guide provides instructions for solving notebook problems yourself or with help from HP.

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Help Is Available

You can obtain troubleshooting assistance from the Help and Support window, the World Wide Web, the telephone, or a local service provider. All documentation included with your notebook is available on the World Wide Web in several languages.

- If you can access the Windows desktop on your notebook, HP recommends that you begin troubleshooting any notebook problem by using the Help and Support Center window. To access the Help and Support Center window:
    - In Microsoft Windows XP Professional or Microsoft Windows XP Home, select Start > Help and Support.
    - In Microsoft Windows 2000 Professional, select Start > Help.

  For more information about using the Help and Support Center window, see "Help from Your Notebook" later in this chapter.
- If you cannot access the Windows desktop on your notebook or would like to eliminate the most common problems before using other troubleshooting resources, try the procedures in the "Quick Solutions Checklist," next in this chapter.

Quick Solutions Checklist

Is the Notebook Receiving Adequate Power?

If the power indicator light is off and the notebook cannot be turned on, adequate power may not be available to the notebook.

On some models the power indicator light is the AC adapter light. On other models the power indicator is the battery light. To identify the power indicator light on your notebook, refer to your model-specific documentation.

To make sure adequate power is available to the notebook:

- If the notebook is running on battery power or is connected to an external power source other than an electrical outlet, connect the notebook to an electrical outlet using the AC adapter. If the notebook turns on when connected to external power but not when running on a battery pack, recharge or replace the battery pack.
- Make sure the power cord and AC adapter cable connections are secure.
- Verify that the electrical outlet is providing adequate power by plugging another electrical device into the outlet.
- Plug the notebook (through the AC adapter) into an outlet in a different room and on a different circuit.

When the notebook is receiving adequate power, the power indicator light (AC adapter light or battery light) turns on.

Is the Notebook Turned On?

The notebook may be in Standby or in Hibernation. To resume the notebook from Standby or restore from Hibernation:

- If your model has a power button, briefly press the power button.
- If your model has a power switch, briefly slide the power switch as described in your model-specific documentation.

Is the Notebook Overheated?

It is normal for the notebook to feel warm to the touch while it is in use. But if the notebook feels *extremely* warm, it may be overheating because a vent is blocked. Overheating can cause the notebook to become unresponsive.

If you suspect that overheating could be causing the problem, allow the notebook to cool to room temperature. Then:

- Use the notebook on a hard surface, not on a soft surface. A rug, pillow, thick clothing, upholstery, or other fabric could block an underside vent.
- Position the notebook so that no side or rear vent is blocked by a vertical surface such as a wall or optional equipment.

Is the System Unresponsive?

If the system has stopped responding, you may need to restart or shut down and then start up the notebook. If you are unable to use normal Windows restart or shutdown procedures:

1. Press **ctrl+alt+delete.** Then:
   - ❏ In Windows 2000 Professional, select the Shut Down button, press the down arrow beside the What Do You Want The Computer To Do field until Restart or Shut Down is displayed, then select the OK button.
   - ❏ In Windows XP, select the Turn Off Computer button, then select the Turn Off button.
2. If you are unable to shut down the notebook with **ctrl+alt+delete:**
   - ❏ On a model with a power button, press and hold the power button for 5 seconds.
   - ❏ On a model with a power switch, slide and hold the power switch for 5 seconds.

3. If your model has a reset button, insert the end of a small object like a straightened paper clip into the reset button, then press the power button. (This restarts the notebook.) For information about a reset button on your model, refer to the *Startup Guide, Hardware Guide,* or *Reference Guide* included with your notebook.
4. If you are unable to turn off the notebook with the power button or power switch, or to restart the notebook with the reset button, disconnect the notebook from external power, then remove the battery pack.

Is an External Device Not Working?

If an external device does not function as expected:

- Turn on the device exactly as instructed in the device documentation. (Some optional devices, such as external monitors, printers, and devices connected to a parallel connector, must be turned on *before* the notebook is turned on.)
- Verify that:
  - ❏ The device is connected to the correct jack, port, or connector.
  - ❏ All device connections are secure.
  - ❏ The device is receiving adequate electrical power.
  - ❏ The correct device drivers are installed.
- Install the latest available system ROM (read only memory). For instructions, refer to your model-specific documentation.

Is Software Functioning Abnormally?

If your software is not functioning normally:

- Restart the notebook.
- Run a virus scan.

  When you use the notebook for network or Internet access, you expose the notebook to computer viruses. Computer viruses can disable the operating system, your applications, or your utilities or cause them to function abnormally. Antivirus software can detect most viruses, destroy them, and, in most cases, repair any damage they have caused.

  Antivirus software is provided with some notebooks and can be purchased for all notebooks from most computer or electronics retailers. For information about running a virus scan, refer to the documentation included with the antivirus software.
- Make sure sufficient space is available on the hard drive. For information about displaying the space available on the hard drive, refer to your operating system online Help or printed documentation.
- Delete the last application you installed.

- Back up your data files, then repair or reinstall the software.
  - ❏ To repair or reinstall the operating system or an HP application or utility, use the restoration CDs included with the notebook.

    Instructions for using the CDs to repair or reinstall software are included with all notebook models. On some models, these instructions are included in the restoration CD package. On other models, the instructions are provided in model-specific documentation such as a *Software Guide* or *Reference Guide*.
  - ❏ To repair or reinstall software that was not preloaded or preinstalled, follow the instructions in the documentation provided with the software.

CAUTION: To prevent file corruption and be sure that the correct drivers are installed, restore or reinstall software only when the notebook is connected to external power through the AC adapter or an optional DC cable. (Do not repair or restore software while the notebook is docked or running on battery power.) During the reinstallation:

- Do not unplug the notebook from external power.
- Do not shut down the notebook.
- Do not remove or insert a drive.
- Do not add or remove any internal or external device.

Finding the Help You Need

Help from Your Notebook

To access the Help and Support Center window:

- In Windows 2000 Professional, select Start > Help.
- In Windows XP, select Start > Help and Support.

Help and Support Center is a comprehensive resource for contacting an HP support specialist, downloading software or software updates, and managing your notebook system. The system management features can help you learn to use, optimize, and customize, as well as troubleshoot, your notebook hardware, operating system, and other software.

On-screen instructions are provided for all topics.

Help from Documentation

For operating system help:

- In Windows 2000 Professional, select Start > Help.
- In Windows XP, select Start > Help and Support.

Refer also to your operating system online Help or printed documentation. For additional operating system help, visit the Microsoft Web site at http://www.microsoft.com.

For application or utility help: Open the software, then select the Help option. The Help option may be a button or menu item that is labeled “Help” or identified with a question mark icon. Some Help files can be accessed by pressing the **F1** (or **f1**) key.

For help with optional hardware: Refer to the documentation included with the device. Documentation may be printed, on a CD, or within the device software. Some device documentation includes troubleshooting as well as general instructions.

For help specific to your notebook:

- In Windows 2000 Professional, select Start > Help.
- In Windows XP, select Start > Help and Support.

Refer also to the model-specific guides included with your notebook. Model-specific guides vary by model. Typical titles include: *Startup Guide, Hardware Guide, Software Guide,* and *Reference Guide.* Model-specific guides may be printed or provided on the *Documentation Library* CD.

For general troubleshooting help: This troubleshooting guide provides general troubleshooting tips. These tips apply to most notebooks but do not include model-specific procedures.

Help from the World Wide Web

Most hardware and software manufacturers provide extensive troubleshooting information on their Web sites and provide their Web site address on their packaging or documentation.

At the HP Web site, you can browse the reference information or submit questions via email to customer support specialists. To access the support area of the Web site, use your Web browser to visit:

http://www.hp.com/support

To access specific areas of the HP Web site directly, HP recommends that you use the links in the Help and Support Center utility. To access the utility:

- In Windows 2000 Professional, select Start > Help.
- In Windows XP, select Start > Help and Support.

Help by Telephone

Preparing to Call Customer Support

To provide the fastest possible resolution of your problem, have the following items available when you call:

- The notebook.
- Serial number and model description, which are provided on labels affixed to the notebook.
- Purchase date on the invoice.
- Conditions under which the problem has occurred.
- Error messages that have been displayed.
- Brand and model name of the optional printer(s) you are using.
- Operating system version number and registration number. To display the operating system version number and registration number:
  - In Windows 2000 Professional, select Start > Settings > Control Panel > System > General tab.
  - In Windows XP, select Start > Control Panel > Performance and Maintenance > System > General tab.

Accessing Customer Support Telephone Numbers

To obtain a list of worldwide customer support telephone numbers:

- Refer to the printed *Worldwide Telephone Numbers* booklet included in English only with the notebook.
- Display customer support telephone numbers on-screen:
    - In Windows 2000 Professional, select Start > Settings > Control Panel > System > General tab. Then, near the lower edge of the System Properties window, select the Support Information button.
    - In Windows XP, select Start > Performance and Maintenance icon > System icon. Then, near the lower edge of the System Properties window, select the Support Information button.
- Obtain the telephone numbers from the HP Web site at http://www.hp.com.

Help from a Service Provider

To contact an HP service provider near you, refer to the *Worldwide Telephone Numbers* booklet included in English only with the notebook. For optimal service:

- Provide all information listed in the "Preparing to Call Customer Support" section earlier in this chapter.
- Remove or disclose all passwords.

2

Problems and Solutions

Before You Begin

This chapter contains general solutions to problems that you may encounter with your notebook. Try the solutions one at a time. If a single problem has multiple solutions, try the solutions in the order in which they are presented.

Because the listed problems and solutions are *general:*

- The problems and solutions apply to most, but not all, notebooks. Some problems and solutions may not apply to your model.

  For example, some models may not have volume control buttons; others may not have drive bays. If a solution involves hardware or software that is not available on your model, try the other solutions.

- The solutions do not include detailed procedures which vary by model. For detailed model-specific procedures, refer to the model-specific documentation included with your notebook.

  For example, if a solution suggests that you update system ROM, you might need to refer to a guide entitled *Software Guide* or *Reference Guide* to obtain ROM update instructions for your model.

- The problems and solutions include alternate terms for similar features.

  For example, some models have a power button and others have a power switch. Since power buttons and power switches have similar functions, a solution may suggest that you "press the power button (or slide the power switch)."

Audio Problems

Sound is not audible

- Press the volume button to increase volume.
- Double-click the speaker icon on the taskbar, then clear the Mute All check box.
- Press the mute button. (Sound should be audible when the mute light is off.)
- Verify that no headset, external speakers, or headphones are connected to the notebook. These devices mute the internal speakers. If one of these devices is connected to the notebook, use or disconnect it.
- When you are operating your notebook in MS-DOS mode (for example, when running an MS-DOS game), sound may be erratic. To optimize the sound capabilities of your notebook, use only Windows applications.

Sound does not record

- If the internal microphone does not record and an external microphone is connected to the system, disconnect or use the external microphone. On most models, a connected external microphone disables the internal microphone.
- Plug in an external microphone. Some models do not have an internal microphone.
- Check the settings in your sound recording software, particularly the recording source and recording volume settings. To access most sound recording applications select Start > All Programs (or Programs) > Accessories > Multimedia (or Entertainment), then select the sound recording application.

Battery and Power Problems

✎ See also the power-related items on the "Quick Solutions Checklist" in the "Help Is Available" chapter.

Notebook does not turn on

- Connect the notebook to an electrical outlet using the AC adapter. Make sure all connections are secure and that the electrical outlet is providing adequate power. (If the notebook fails to turn on and contains a battery pack, the battery pack may be defective. Remove the battery pack from the notebook.)
- If the notebook is extremely warm, cold, or moist, return it to an environment within the specifications provided in your model-specific documentation. When you return to your work, be sure the vents are unobstructed.
- If you have just added a new memory module, remove the module. It may be incompatible with your notebook. Review the memory module specifications in your model-specific documentation.

Notebook turns off unexpectedly

- If the notebook turns off immediately after being turned on, the battery pack charge may be extremely low. Connect the notebook to external power, then recharge or replace the battery pack.
- If the notebook turns off while unattended, the system may have initiated Hibernation. To resume from Hibernation, press the power button (or slide the power switch).
- If the notebook turns off or initiates Standby *and* feels extremely warm, it may have exceeded the maximum operating temperature. Allow the notebook to cool down. Then, whenever you use the notebook, make sure that all vents are clear of obstructions.

Indicators are displaying a low-battery condition

Low-battery indicators vary by model and settings. Common indicators include audible alarms, messages on the screen, and lights that flash or change color.

- To interpret or set low-battery indicators, refer to your model-specific or operating system online Help or printed documentation.
- To respond to a low-battery indicator:
  - If your work remains on the screen, save your work, then initiate Hibernation. To continue working, connect the notebook to external power. Be sure to replace or recharge the battery pack before again running the notebook on battery power.
  - If the screen is blank, the notebook may have initiated Hibernation. To continue working, connect the notebook to external power, then restore from Hibernation. Be sure to replace or recharge the battery pack before again running the notebook on battery power.
  - If your unsaved work is lost after restoring power, the notebook may have been unable to initiate Hibernation because Hibernation was disabled. HP strongly recommends that you run the notebook on battery power only while Hibernation is enabled. To enable Hibernation:
    - In Windows 2000 Professional, select Start > Settings > Control Panel. Double-click Power Options, select the Hibernate tab, then select the Enable Hibernate Support check box.
    - In Windows XP, select Start > Control Panel > Performance and Maintenance > Power Options icon. Select the Hibernate tab, then select the Enable Hibernate Support check box.

Battery pack does not charge

- The battery pack may be fully charged. Refer to your model-specific documentation for information about determining battery pack status.
- If the battery pack is extremely warm or cool, allow the battery pack to reach room temperature.
- Make sure that the notebook is connected to AC power, that all connections are secure, and that the power source is providing adequate power levels.
- If you are using an AC adapter:
    - Make sure the AC adapter is the AC adapter included with the notebook or a replacement adapter provided by HP.
    - If the adapter is plugged into a power strip, unplug it from the power strip and plug it directly into an electrical outlet.
- Make sure the battery is correctly inserted, and, if required on your notebook model, locked into place.
- Replace the battery pack. It may be defective or have reached the end of its useful life. Battery life varies, because it is affected by power levels and maintenance and storage practices.
    - For information about prolonging the life of your battery pack, refer to the battery and power sections of your model-specific documentation.
    - For battery pack warranty information, refer to the warranty documentation included with your notebook or optional battery pack.

Battery pack is warm after charging

No action is required. Warming occurs naturally during charging.

Battery pack charge displays seem inaccurate

- If only the time remaining display seems inaccurate, no action may be necessary.

  The time remaining display indicates the approximate running time remaining on the battery pack *if the battery pack continues to provide power at the current level.* For example, the time remaining will decrease if you start playing a DVD or backing up to a CompactFlash card and will increase if you stop playing the DVD or when the backup is complete.

  If the time remaining display seems inaccurate even when the level of power use remains constant, refer to "To increase the accuracy of all battery pack charge displays," next in this section.

- To increase the accuracy of all battery pack charge displays:
  - Fully charge a new battery pack before using it to run the notebook.
  - Allow an in-use battery pack to discharge to less than 10 percent of a full charge through normal use before charging it.
  - When you charge any battery pack, charge it fully.
  - Calibrate the battery pack, especially if it has not been used for 1 month or more. For instructions, refer to your model-specific documentation.

- Replace the battery pack. It may be defective or have reached the end of its useful life. Battery life varies with battery pack power usage and maintenance procedures.
  - For information about prolonging the life of your battery pack, refer to the battery and power sections of your model-specific documentation.
  - For battery pack warranty information, refer to the warranty documentation included with your notebook or optional battery pack.

Battery pack run time is shorter than expected

Review the information in your model-specific documentation regarding:

- Battery conservation settings and procedures.
- Battery storage environments and procedures.
- Notebook operating environment specifications.

Standby cannot be initiated

Review the information in your model-specific documentation regarding:

- How drive media, such as diskettes, CDs, or DVDs, affect Standby.
- How infrared affects Standby.

Hibernation cannot be initiated

- Make sure Hibernation is enabled. To enable Hibernation:
    - In Windows 2000 Professional, select Start > Settings > Control Panel. Double-click Power Options, select the Hibernate tab, then select the Enable Hibernate Support check box.
    - In Windows XP, select Start > Control Panel > Performance and Maintenance > Power Options icon. Select the Hibernate tab, then select the Enable Hibernate Support check box.
- Make sure the Hibernation timeouts are not set to Never. To access the Hibernation timeout settings:
    - In Windows 2000 Professional, select Start > Settings > Control Panel. Double-click Power Options, then select the Power Schemes tab.
    - In Windows XP, select Start > Control Panel > Performance and Maintenance icon > Power Schemes tab.
- Review the information in your model-specific documentation regarding:
    - How drive media, such as diskettes, CDs, or DVDs, affect Hibernation.
    - How infrared affects Hibernation.

CD or DVD Problems

On some notebooks, the CD or DVD drive is removable. On other notebooks, the CD or DVD drive should be removed only by an authorized service provider.

△ To prevent damage to your CD or DVD drive and to your notebook, do not remove a CD or DVD drive unless you are certain that the CD or DVD drive on your notebook is removable. If your model-specific documentation does not include instructions for inserting and removing a CD or DVD drive, do not remove the CD or DVD drive.

CD or DVD drive is not recognized by the system

- Make sure the correct device drivers are installed.
- Update the system ROM.
- If the notebook is running a retail version of the operating system and the drive was inserted while the system was on, in Standby, or in Hibernation, shut down the notebook. While the notebook is off, remove, then reinsert the drive. Then turn on the notebook.
- Run a virus scan.
- If the CD or DVD drive on your notebook is removable:
  - Remove, then reinsert, the drive exactly as instructed in your model-specific documentation.
  - Verify that the drive is not defective by using it in another drive bay.
  - Verify that the drive bay is not defective by using another drive in the same bay.

No alert sounds when a CD or DVD drive is inserted

If the notebook is off, in Standby, or in Hibernation, no action is necessary. The notebook audibly signals a successful drive insertion or removal only when the notebook is on.

Notebook cannot start up from a CD or DVD

- Allow more time. Startup from a CD or DVD may take up to 30 seconds or longer.
- Make sure the CD or DVD is bootable.
- Refer to your model-specific documentation for information about enabling the drive as a boot device.
- If the drive is removable and is currently inserted into an optional port replicator, insert the drive into a notebook drive bay.

Notebook cannot read a CD or DVD

- Allow more time. It may take up to 30 seconds or longer for the drive to determine the type of media that has been inserted.
- Make sure a single-sided CD or DVD has been inserted label side up.
- Make sure the CD or DVD is inserted exactly as directed in your model-specific or drive documentation.
- Make sure the CD or DVD is supported by the drive. For example, you can play a CD in a DVD drive, but you cannot play a DVD in a CD drive.
- Change the regional setting on the drive. For instructions, refer to your model-specific documentation or, if you are using optional DVD software, to your DVD software documentation.
- Clean the CD or DVD.

- Remove the CD or DVD, restart the notebook, then reinsert the CD or DVD.
- If you created the CD or DVD, try using a different brand of CD or DVD.

DVD movie does not fill the screen

Some double-sided DVDs have a different format (standard or wide screen) on each side. In wide screen format, black bands appear at the top and bottom of the screen. To view the standard format, turn over the DVD, then play the DVD.

DVD play is erratic

- Close all other programs while playing the DVD. (It may be necessary to restart Windows to free all resources.)
- Play the DVD while running the notebook on external power. Or, change the operating system Power Scheme to provide additional power to the notebook while it is running on battery power.
- If video corruption occurs at the beginning of play:
  - Allow time for the system to process the copyright material at the beginning of the DVD.
  - Stop, then restart, the DVD movie.
- Clean the DVD.

Standby or Hibernation affects CD or DVD play

Initiating Standby or Hibernation while playing a CD or DVD may stop the play or diminish the quality of the play.

- Remove the CD or DVD from the drive before initiating Standby or Hibernation.
- If Standby or Hibernation is initiated while playing a CD or DVD, resume from Standby or restore from Hibernation, then restart the notebook.

DVD region error code is displayed

Change the regional setting on the drive. (There may be a limited amount of times the regional setting can be changed.) For instructions, refer to your model-specific documentation or, if you are using optional DVD software, to your DVD software documentation.

Digital Memory Card or Memory Stick problems

This section discusses problems you may encounter while using an SD (Secure Digital) Card, MMC (multimedia card), CompactFlash card, Memory Stick, or other digital storage product. The slots which support these products vary by notebook model. For example, some notebooks feature an Integrated Digital Media Slot or Integrated Memory Reader. Other models feature an SD Card slot or CompactFlash card slot. The information in this section applies to most digital memory products.

For information about solving RAM (Random Access Memory) problems and using memory modules, see the "Memory Problems" section.

Notebook does not accept a digital memory card or Memory Stick

Many slots that accept a digital memory card or Memory Stick support only specific digital formats. For example, a slot identified as a CompactFlash card slot may have a reader which supports only CompactFlash cards. A slot identified as an SD Card slot may have a reader which supports only SD Cards and MMCs. Refer to your model-specific documentation for information about which products are supported by the digital memory features on your notebook.

You can obtain an adapter that supports several types of digital memory products from most computer or electronics retailers. Most of these adapters can be used with any notebook model.

Digital memory alerts are not audible

- Press the volume button to increase volume.
- Double-click the speaker icon on the taskbar, then make sure the Mute All check box is clear.

- Press the mute button on the notebook and verify that the mute light is off. (Sound should be audible when the mute light is off.)
- Verify that no headset, external speakers, or headphones are connected to the notebook. These devices disable the internal speakers. If one of these devices is connected to the notebook, use or disconnect it.

Notebook does not recognize a digital memory card or Memory Stick

- Remove, then reinsert, the digital memory card or Memory Stick.
- Restart the notebook.
- Verify that the digital memory card or Memory Stick is functioning correctly by trying the product in another notebook.

Digital memory card or Memory Stick does not work and alerts are not audible

- Verify that the digital memory card or Memory Stick is correctly inserted. Digital cards should be inserted label side up.
- Verify that the digital memory card or Memory Stick is configured correctly. For configuration information, refer to the digital product documentation. The model-specific documentation for some models may contain additional configuration information.
- Verify that the digital memory card or Memory Stick is functioning correctly by trying the product in another notebook.
- If you are trying to access a digital storage card or Memory Stick:
    - Verify that you are using the correct drive designation.
    - Verify that the digital memory card or Memory Stick is correctly formatted. For formatting instructions, refer to the product documentation.

Display Problems

Display is blank

- Tap or move the pointing device (TouchPad, pointing stick, or optional external mouse).
- Resume from Standby or exit Hibernation.
- If the notebook is extremely warm or cold, allow it to reach room temperature.
- Switch the image to the notebook or external display. For instructions:
    - Refer to your model-specific documentation.
        - Some models have a hotkey that switches the image among the notebook display and optional external devices such as monitors or camcorders.
        - Some models have settings in the Setup utility that affect display locations.
    - Refer to your operating system online Help or printed documentation. Some operating systems have Extended Desktop features that affect the location of the display.

Desktop icons are too large or too small

Use the settings in your operating system to adjust icon size. Larger icons may be easier to read. Selecting a smaller icon size enables you to display more icons on the desktop.

Characters are dim or difficult to read

- If the notebook is in direct light, move the notebook or tilt the display.
- Increase the screen brightness. Some models have a hotkey that controls screen brightness.
- Adjust the screen settings in your operating system. For example, to make characters on the screen appear larger or smaller, adjust the resolution setting.
- If characters are garbled or the display flashes only while an optional external monitor is connected to the notebook, restart the notebook, then lower the screen resolution on the external monitor as instructed in your operating system or external monitor documentation.

FireWire (IEEE 1394) Problems

The high-speed serial bus connector available on some notebooks may be identified in your model-specific documentation as the *FireWire connector* or as the *1394 connector*. The information in this section applies to connectors with either name.

FireWire device does not work

- Be sure the FireWire device is plugged securely into an electrical outlet as well as into the FireWire connector on the notebook.
- Verify that the device is functioning properly by connecting it to a FireWire connector on another system.
- Verify with the device manufacturer that you are using the correct driver(s).
- Use the Device Manager utility in your operating system to check for and resolve any resource conflicts.

FireWire connector has only 4 pins

The FireWire connector on your notebook may differ from the FireWire connector on a desktop computer. Desktop computers often have 6-pin FireWire connectors and notebooks often have 4-pin FireWire connectors. To connect a FireWire device with a 6-pin cable to your notebook:

- Replace the 6-pin cable on the device with a 4-pin cable.
- Use a 6-pin to 4-pin adapter.

You can obtain a 6-pin cable or a 6-pin to 4-pin adapter from most computer or electronics retailers.

A FireWire device connected to the notebook with a 4-pin connection must be connected to external power as well as to the notebook.

Game Problems

Game frequently stops responding or locks up

- Reinstall the game, noting any settings and default selections that pertain to your model, then restart the game.
- Verify that your model meets the hardware and software requirements of the game. To obtain these requirements, review the game documentation, visit the game manufacturer's Web site, or contact the game manufacturer.

Game sounds are erratic

If you are running an MS-DOS game, sound may be erratic. To optimize the sound capabilities of your notebook, use only Windows-based games.

Hard Drive Problems

✎ The *primary* hard drive is a hard drive in a hard drive bay; an optional *secondary* hard drive is a hard drive in an additional bay. The additional bay may be a MultiBay in the notebook, a bay in a port replicator, or an external bay.

Primary hard drive cannot be accessed

The drive may be protected by DriveLock or other drive protection software. For security management procedures, refer in your model-specific documentation to a security, password, or Setup utility section.

Primary hard drive is not recognized

Replace the hard drive:

- If your model-specific documentation includes procedures for replacing the primary hard drive, follow the instructions carefully.
- If your model-specific documentation does not include hard drive replacement instructions, refer to the *Worldwide Telephone Numbers* booklet included with the notebook to contact a service provider.

Secondary hard drive is not recognized

- Remove, then reinsert, a secondary hard drive exactly as instructed in your model-specific notebook documentation or in your port replicator or external bay documentation. Be certain the drive is firmly seated in the bay.
- If a secondary hard drive was inserted while the notebook was on, in Standby, or in Hibernation, reinsert the secondary hard drive after the system has been shut down. Always shut down the notebook before removing or inserting a hard drive.
- To verify that the problem is with a secondary hard drive, try another hard drive in the bay.

Notebook cannot start from a secondary hard drive

- Start the notebook from the primary hard drive.
- Refer to your model-specific documentation for information about adjusting the startup sequence, sometimes called the boot order.
- If the drive is in a port replicator, insert the drive into a notebook MultiBay.

Infrared Communication Problems

✎ Infrared communication is managed by your operating system. To implement some of the solutions suggested in this section and to perform additional troubleshooting, you may need to refer to your operating system online Help or printed documentation. If you are using optional infrared software, refer also to the documentation included with that software.

Infrared link cannot be established

- See also "Notebook does not transmit or receive data," next in this section.
- If your notebook or a target notebook is in Standby, resume the notebook from Standby.
- Make sure that only one application is using the infrared port.
- Be sure the infrared software you are using on your notebook is properly installed and enabled on the target device. (On some models, the notebook infrared port is fully enabled whenever the notebook is turned on. On other models, the infrared port must be enabled manually.)
- Verify that the target device is IrDA-compliant and compatible with the infrared hardware and software on your notebook. Such information is usually provided in the device documentation or on the device manufacturer's Web site.
- Try another COM port setting.
- Verify that the baud rate, number of bits, stop byte, and parity conflict settings are identical on your notebook and the target device.

Notebook does not transmit or receive data

- Move the infrared ports closer together. They should be no more than 1 meter (3 feet) apart.
- Position the infrared ports so they face each other as directly as possible. The maximum capture angle is 30 degrees, so the ports must be aligned no more than 15 degrees off center.
- If direct sunlight, energy-saving fluorescent light, or flashing incandescent light is reaching the infrared ports:
  - Remove or block the interfering light source(s).
  - Move the infrared ports closer together.
- Make sure that no additional infrared, remote control, or other wireless devices (such as headphones, a headset, or a cell phone) are aimed at either infrared port.
- Remove any objects, including loose papers, between the infrared ports that could be interfering with the transmission.
- Be sure that neither unit moves during the transmission. A transmission can be prevented or interrupted even by strong vibration.
- Clean both infrared lenses with a clean, lint-free cloth.
- Select a lower, fixed baud rate for both devices. (The baud rate setting must be identical on both devices.)

Standby is preventing infrared transmission

Standby is incompatible with infrared transmission.

- If a transmitting or receiving notebook is in Standby, the transmission cannot begin. Be sure both notebooks are turned on.
- If Standby is initiated during a transmission, the transmission stops. On some models, the transmission resumes when the notebook resumes from Standby. On other models, the transmission must be restarted manually.

Internet Problems

✎ The information provided in the "Modem Problems," "Network Problems," or "Wireless LAN (WLAN) Device Problems" sections may also be helpful.

Notebook cannot connect to the Internet

- Verify that your ISP service has not been interrupted.
- Verify your Internet settings.
- Contact your ISP provider for assistance.

Internet buttons do not respond

Some models include one or more buttons that provide direct access to the Internet. Button names vary by model. The information in this section applies to buttons commonly called Easy Access or Quick Launch buttons. If the Internet buttons on your notebook do not respond:

- Verify that your ISP service has not been interrupted.
- Reconnect to your ISP and retry the Internet buttons.
- Review the Internet button settings information in your model-specific documentation.

Notebook cannot browse a selected Web site

- Verify the URL or try another URL.
- Visit the site at another time. (The Web site may be having technical problems or be overwhelmed by too many visitors.)

Keyboard and Pointing Device Problems

✎ Many pointing device actions are controlled by mouse settings in the operating system. To change the pointer or click speed, add or remove mouse trails, or adjust other pointing device settings, refer to your operating system online Help or printed documentation. If you are using an optional external mouse, refer also to your mouse documentation.

Notebook keyboard keys stick or do not respond

Clean the keyboard as instructed in your model-specific documentation. Instructions for keyboard maintenance are often provided in a *Maintenance, Shipping and Travel* guide on the *Documentation Library* CD. On some models, keyboard maintenance instructions are included in another guide, such as a *Hardware Guide* or *Reference Guide.*

Assorted keys are typing incorrect characters

Change the keyboard language setting as described in your model-specific *Startup Guide, Reference Guide,* or your operating system online Help or printed documentation.

Letter keys are typing numbers

Disable the notebook keypad as instructed in your model-specific documentation. Your documentation may list the notebook keypad as the “embedded numeric keypad” or the “internal keypad.”

Keypad does not work

- Enable the notebook keypad as instructed in your model-specific documentation. Your documentation may list the keypad as the "embedded numeric keypad" or the "internal keypad."
- If an optional external keypad is connected to the system, use the external keypad. Or, disconnect the external keypad, then use the notebook keypad.

Hotkeys do not work on an external keyboard

On some models, hotkeys are not supported on an optional external keyboard. On other models, hotkeys are used differently on an external keyboard. Refer to the hotkey section of your model-specific documentation.

Pointer drifts

On some models, it is normal for the pointer to continue moving for a short time after you release the pointing stick or TouchPad. Wait a few seconds after removing your hand from the pointing device, and the pointer will stabilize.

Pointer moves erratically as you type

- Press the TouchPad on-off button, if available on your model, to turn off the TouchPad while you are typing.
- Clean the TouchPad with a damp cloth, then wipe it dry.
- Adjust the TouchPad sensitivity settings. On some models, these settings are accessible through the operating system mouse window. Refer to your model-specific documentation for information about additional TouchPad settings.
- Restart the notebook.

Pointing stick does not work

- If an optional external mouse is connected to the system, it may disable the pointing stick. Some models include a utility, often called the Setup utility, in which you can set the system to respond to both an external mouse and the pointing stick.
- If your notebook has both a TouchPad and a pointing stick, be sure the notebook is set to respond to the pointing stick.
- Restart the notebook.

TouchPad does not work

- Press the TouchPad on/off button, if available on your notebook, to turn on the TouchPad.
- If an external mouse is connected to the system, it may disable the TouchPad. Some models include a utility, often called the Setup utility, in which you can set the system to respond to both an external mouse and the TouchPad.
- If your notebook has both a pointing stick and a TouchPad, be sure the notebook is set to respond to the TouchPad.
- Clean the TouchPad with a damp cloth, then wipe it dry.
- Adjust the TouchPad sensitivity settings. On some models, these settings are accessible through the operating system mouse window. Refer to your model-specific documentation for information about any additional TouchPad settings.
- Restart the notebook.

External mouse does not work

- Make sure the mouse is securely connected to the system and that the correct drivers are installed.
- Clean the mouse.

PS/2 scroll mouse does not work

- On some models the internal pointing device (pointing stick or TouchPad) must be disabled before the scroll feature on an optional external mouse can be supported. Some of these models include a utility, often called the Setup utility, in which you can set the system to disable the internal pointing device when an optional mouse is in use.
- Disconnect the scroll mouse, initiate Standby, then reconnect the scroll mouse. (To resume use of the TouchPad on some models, you must initiate Standby or shut down the notebook, then disconnect the scroll mouse.)

USB keyboard or pointing device does not work

Refer to your model-specific documentation for information about USB legacy support.

Memory Problems

This section discusses problems you may encounter with RAM (Random Access Memory). For information about solving problems you may encounter while using an SD (Secure Digital) Card, MMC (multimedia card), CompactFlash card, Smart Media Card, or other digital memory card, see the "Digital Memory Card or Memory Stick problems" section.

Insufficient memory message is displayed

- Close one or more applications.
- Restart the notebook.

New memory module does not increase memory

- Restart the notebook after the installation is complete.
- Review the memory module installation instructions in your model-specific documentation. The module may be incompatible with your notebook or be incorrectly installed.

New memory module affects startup

If the notebook will not start up after you have installed a new memory module, remove the memory module; it may be incompatible with your notebook. Review the memory module specifications in your model-specific documentation.

Modem Problems

✎ See also the "Internet Problems" section.

No dial tone is audible

- Verify that the modem cable is securely connected to the telephone wall jack and to the RJ-11 jack on the notebook or port replicator.
- Verify that the telephone wall jack is functional by plugging a telephone into the wall jack. If you do not hear a dial tone on the telephone, connect the modem to another wall jack or contact your telephone service provider.
- Verify that no other modem or telephone is using the telephone line. (An extension telephone that has not been hung up may be causing the problem.)
- Verify that the correct dialing mode (tone or pulse) is selected.
- Verify that the modem is connected to an analog, not a digital, telephone line. A line described as a PBX line is usually a digital line. A telephone line described as a data line, fax machine line, modem line, or standard telephone line is probably an analog line.
- If you are not in your home country, refer to the section of your notebook documentation that provides instructions for using the modem internationally. The instructions may be in your model-specific documentation or in a *Modem and Networking* guide.

Modem does not dial correctly

- Verify that you are dialing the correct number.
- Dial the number with a telephone. If you hear a busy signal, dial the number with the modem at a later time.

- Verify that you are dialing all necessary prefixes, such as outside line, long distance, or country codes.
- Disable the call waiting feature before dialing. To obtain the disable call waiting code for your dialing area, contact your local telephone service provider.
- If you are not in your home country, refer to the section of your notebook documentation that provides instructions for using the modem internationally. The instructions may be in your model-specific documentation or in a *Modem and Networking* guide.

Modem dials correctly but does not connect

- Verify that the modem is connected to an analog, not a digital, telephone line. A line described as a PBX line is usually a digital line. A telephone line described as a data line, fax machine line, modem line, or standard telephone line is probably an analog line.
- Connect the modem to a different telephone wall jack.

Modem sounds are not audible

- Press the volume button to increase volume.
- Double-click the speaker icon on the taskbar, then clear the Mute All check box.
- Press the mute button on the notebook and verify that the mute light is off. (Sound should be audible when the mute light is off.)
- Verify that no headset, external speakers, or headphones are connected to the notebook. These devices disable the internal speakers. If one of these devices is connected to the notebook, either use the device or disconnect the device.
- Adjust the modem volume in your operating system or optional modem software.

Modem does not connect at highest speed

- Ask your telephone service provider to check your telephone line for excessive static or noise. You may need to request a line filter. Meanwhile, connect the modem to another telephone line. Poor line conditions at the remote number can also slow transmission speed.
- Verify that no other modem or telephone is using the telephone line. (An extension telephone that has not been hung up may be causing the problem.)

Characters are garbled or transfer rates are slow

Ask your telephone service provider to check your telephone line for excessive static or noise. You may need to request a line filter. Meanwhile, connect the modem to another telephone line. (Poor line conditions at the remote number can also slow transmission speed.)

Modem loses connection

- Disable the call waiting feature before dialing. To obtain information about disabling call waiting and to obtain the disable call waiting code for your dialing area, contact your local telephone service provider.
- Verify that no other modem or telephone is using the telephone line. (An extension telephone that has not been hung up may be causing the problem.)
- Ask your service provider if idle time on the line terminates a connection.

- If the notebook has reached a low-battery condition:
  1. Connect the notebook to external power.
  2. Restart the communications software application.
  3. Replace or recharge the battery pack before again using the modem while the notebook is running on battery power.
- Update your modem software. For instructions, refer to the software update section of your model-specific documentation.

Fax transmissions do not work

- Close any other open communication software applications.
- Verify that you are using the correct printer driver.
- If the fax software is set to Class 2, try changing the setting to Class 1.

Message reports excessive line current

Verify that the modem is connected to an analog, not a digital, telephone line. A line described as a PBX line is usually a digital line. A telephone line described as a data line, fax machine line, modem line, or standard telephone line is probably an analog line.

Network Problems

Notebook cannot connect to the network

✎ For information about the network status indicator(s) on your notebook, refer to your model-specific documentation.

- Verify that the network cable is a Category 5 (CAT-5) twisted-pair cable.
- Verify that one end of the network cable is securely plugged into the RJ-45 (network) jack on your system and that the other end of the cable is securely connected to an Ethernet network wall jack (not to a digital telephone wall jack or other similar-looking wall jack).
- Try connecting to a different Ethernet network wall jack that you know is functioning correctly.
- If you are plugging directly into a hub or switch, make sure the hub or switch is turned on and that you are not plugging into the uplink port.

Connection occurs, but network seems inactive

- Using the Device Manager utility in your operating system, verify that the network adapter device driver is properly installed.
- Verify that the TCP/IP or other required networking protocol is bound to the network adapter and properly configured.
- Verify that you are using a valid address for your network. For network address information, contact your network administrator.
- Verify that the network resource you are trying to reach is on and connected to the network.

- Verify that an Ethernet LAN adapter is selected in the Network Properties window of your operating system.
- If you are using a software or hardware firewall, make sure that it is properly configured.

Some network resources are not available

- Verify that you have logged onto the network with the credentials required to access the resources. For credential and logon information, contact your network administrator.
- Verify that the application you are using, for example, your email or Web browser application, is functioning properly.
- To determine whether your notebook must be a member of a Windows domain in order to use the resources, contact your network administrator.

Network connection is slow

Verify that your network adapter is configured for the speed and duplex required by your network. For information about the requirements of your network, contact your network administrator.

No computers found in Network Neighborhood or Network Places

- Verify the network adapter connection to the network.
- If you are part of a Windows workgroup, verify that the workgroup name is correct.
- If you are part of a Windows domain, verify that the domain name is correct and that you are logged into the correct domain.

PC Card problems

PC Card alerts are not audible

- Enable PC Card alerts in the power management section of your operating system software.
- Press the volume button to increase volume.
- Double-click the speaker icon on the taskbar, then clear the Mute All check box.
- Press the mute button on the notebook and verify that the mute light is off. (Sound should be audible when the mute light is off.)
- Verify that no headset, external speakers, or headphones are connected to the notebook. These devices mute the internal speakers. If one of these devices is connected to the notebook, use or disconnect it.

PC Card does not work and alerts are not audible

- Verify that the card is inserted label side up.
- Verify that the PC Card is configured correctly. For configuration information, refer to the PC Card documentation. Additional PC Card configuration information is provided in the model-specific documentation included with some models.
- Verify that the PC Card is functioning correctly by trying the card in another notebook.
- If you are trying to access a storage PC Card:
  - ❏ Verify that you are using the correct drive designation.
  - ❏ Verify that the PC Card is correctly formatted. For formatting instructions, refer to the PC Card documentation.

Notebook does not recognize a PC Card

- Remove, then reinsert, the PC Card.
- Restart the notebook.
- Verify that the PC Card is functioning correctly by trying the card in another notebook.
- If you are using a zoomed video PC Card, refer to your model-specific documentation to determine whether your notebook supports zoomed video.
- If the card requires an IRQ (Interrupt ReQuest), make sure one is available.

Network PC Card stops communicating

The card may have been reset when Standby was initiated or when the notebook was shut down. To reset the card, close all open applications, then remove and reinsert the card.

PC Card modem is not working

Disable the internal modem as instructed in your operating system online Help or printed documentation.

Television problems

S-Video jack has 7 pins

The S-Video jack on some notebooks is a 7-pin jack. In some regions, standard S-Video cables have 4-pin connectors. A 4-pin S-Video cable can be used in a 7-pin S-Video jack.

For information about whether to use an S-Video to S-Video cable or another type of cable, such as S-Video to Scart, refer to your television documentation.

Television is blank

- Tap or move the pointing device (TouchPad, pointing stick, or optional external mouse).
- Resume from Standby or exit Hibernation.
- If the notebook is extremely warm or cold, allow it to reach room temperature.
- Switch the image to the television. For instructions:
    - Refer to your model-specific documentation.
        - Some models have a hotkey that switches the image among the notebook display and optional external devices such as monitors or televisions.
        - Some models have settings in the Setup utility that affect display locations. For example, on some models you can open the Setup utility as instructed in your model-specific documentation, then select System Devices menu > Video Display Device item > Both setting.
    - Refer to your operating system online Help or printed documentation. Some operating systems have Extended Desktop features that affect the location of the display.
- Make sure TV out is enabled on your notebook. For instructions, refer to your operating system online Help or printed documentation.

Temperature Problems

✎ Use the notebook only within the temperature ranges provided in the specifications section of your model-specific documentation.

Notebook feels abnormally hot

- Allow the notebook to cool down, then resume your work. Whenever you use the notebook, make sure that all vents are clear of obstructions. Soft surfaces (such as bedding, upholstery, carpeting, or thick clothing) or hard surfaces (such as an adjoining printer) may block the vents and cause overheating.
- Close all games and applications that you are not using.

Battery pack is warm after charging

No action is required. Warming occurs naturally during charging.

USB Problems

USB device does not work

- If the device requires external power, be sure that it is plugged securely into an electrical outlet as well as into a USB connector on the notebook.
- Verify that the device is functioning properly by connecting it to a USB connector on another system.
- Verify with the device manufacturer that you are using the correct driver(s).
- Use the Device Manager utility in your operating system to check for and resolve any resource conflicts.

USB device does not work during startup

Refer to your model-specific documentation for information about USB legacy support. (USB legacy support enables a USB device, such as an optional external keyboard or mouse, to function during startup, before Windows loads.)

Wireless LAN (WLAN) Device Problems

✎ See also the “Internet Problems” section.

Notebook cannot connect to wireless network

- Verify that the wireless device is turned on. On most models, a light turns on or changes color when the device is turned on. For more information about turning a wireless LAN device on and off and about using the wireless LAN device indicator on your notebook, refer to your model-specific documentation.
- Verify that the antenna(s) are free from obstructions. For information about the number and location of antennas on your notebook refer to your model-specific documentation.
- Verify that you are within optimal range of an access point (for an infrastructure connection) or another wireless-equipped computer (for an ad hoc connection).
- Use the Device Manager utility in your operating system to verify that the correct wireless LAN device driver is loaded and functioning properly.
- Verify that you are using the correct SSID.
- Verify that the wireless encryption settings are correct.
- If you are trying to connect to an ad hoc network, ensure that the channel settings are correct.
- Consider that wireless LAN performance may be affected by the following factors:
    - ❏ Type and thickness of building construction materials (brick, steel, concrete, glass, etc.)
    - ❏ Nearby electronic and communications equipment and HVAC system.

- ❏ People or objects moving into the range of the antenna and access point.
- ❏ The number of users connecting at one time in a single area to a single access point.
- ❏ The concentration of access points within an area.
- ❏ Channel utilization.

Notebook cannot access network resources

- If you are logging on to a wireless network via an access point but your notebook cannot connect to network resources, your notebook may not have been assigned an IP address. You may have to release and renew your network IP address at the command prompt using the ipconfig commands release and renew.
- Verify that the wireless encryption settings are correct.

Connection breaks after 3 minutes

If Windows XP Service Pack 1 is installed on your notebook, your wireless LAN device authentication is enabled by default. Enabled wireless LAN device authentication requires that an authentication server exist on the network in order for a wireless LAN device to gain access to the network. If the wireless LAN device on your notebook has wireless LAN device authentication enabled and an authentication server does not exist on the network, then the wireless connection will be lost every 3 minutes.

If your network does not require wireless LAN device authentication, you can avoid network disconnections by disabling the wireless LAN device authentication on your notebook. To disable wireless LAN device authentication:

1. Select Start > Control Panel > Network Connections.
2. Right-click the wireless connection, then select Properties.
3. Select the Wireless Networks tab.

4. Select the network name in the Preferred Networks window, then select Properties.
5. Select the Authentication tab.
6. Make sure the check box for authentication is cleared.
7. Select Apply, then select OK.

Notebook cannot connect to Internet when WEP is enabled on the access point

The Windows XP Service Pack 1 changes the numbering of the WEP (Wireless Encryption Protocol) key index from the numbering assigned to the key in the original release of Windows XP. In the original (XP Gold) release, the index keys are numbered 0 through 3. Windows XP Service Pack 1 (SP1) changes the numbering of the index keys to 1 through 4.

As a result, if you were using WEP key 1 on a client with Windows XP Gold, you would need to use WEP key 2 with the same client under Windows XP SP1.

Rate indication in the Connection Status fluctuates

If the rate indication in the Connection Status fluctuates even though the unit is stationary, no action may be necessary.

The algorithm for data rate determination checks the data packet by packet and adjusts the data rate for current conditions. Lost or corrupted packets will cause the data rate to fall back, and subsequent good packets will cause the rate to increase.

Packets can be lost or corrupted by over-the-air disturbances. For example, in an office environment, other transmissions from other WLANs may cause disturbances. In a home environment, disturbances may be caused by microwave ovens or cordless telephones.

Some WLAN cards do not update their rate indications and may not display the actual connection rate.

Throughput and connection range vary

If there are large variations in throughput and range even when equipment is stationary, the cause may be nearby sources of radio frequency interference. WLAN radios operate in unlicensed frequency bands where many other sorts of radio devices may also operate. Such radio devices may severely impact performance of the WLAN. Devices which may cause interference include cordless telephones, microwave ovens, and Bluetooth radio devices.

If the problem is due to a cordless telephone, either the telephone or the WLAN device can be moved to another frequency in the band for improved performance. For channel changing instructions, refer to your telephone or WLAN device documentation.

Notebook cannot detect a Bluetooth device

- Verify that the Bluetooth device is turned on.
  - Some Bluetooth phones must be set for detection and may be detectable by other devices for only a short time.
  - On most notebooks, the device configuration is available in the Entire Bluetooth Neighborhood. For more information, refer to the documentation included with the Bluetooth device.
- Refresh the list of Bluetooth devices as instructed in your Bluetooth documentation.
- Verify that:
  - The Bluetooth search for devices is active.
  - Device responses to the Bluetooth search are not filtered.

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